

Installation guide

RADIO TYBOX

Wireless programmable thermostat



1-zone pack or 2-zone pack



informations

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Device compliant with the requirements of directives:
R&TTE 1999/5/CE



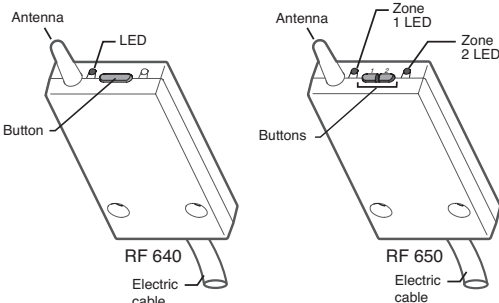
Because of changes in standards and equipment, the characteristics given in the text and the illustrations in this document are not binding unless confirmed by Delta Dore.

Warnings

- Carefully read these instructions prior to installation.
- The unit must be installed in compliance with currently applicable standards.
- Always switch off the mains before installing or servicing the unit.
- Do not attempt to repair the unit yourself; an after-sales service is available.
- The receiver power supply cable must only be replaced by the manufacturer or an approved agent.
- Check that the fastenings are suited to the surface that the unit will be attached to (plasterboard, brick, etc.).
- The diagrams provided are simplified for greater clarity. The protective units and other accessories required by the standards are not illustrated. Standard UTE NF C15-100 and good practice must be complied with. Connected or nearby equipment must not generate excessive interference (directive 2004/108/CE).

Presentation

The 1-zone pack features a RADIO TYBOX transmitter associated with an RF 640 receiver (1 zone).
The 2-zone pack features two RADIO TYBOX transmitters associated with an RF 650 receiver (2 zones).

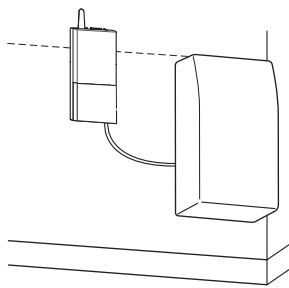


The RF 640 and RF 640 can be connected either to a boiler or to contact switches to control electric heating. The elements of your system (receiver and transmitter(s)) are already associated when delivered. For the 2-zone pack, each transmitter is identified by a label (EMET 1, EMET 2).

Location

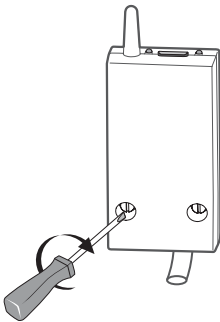
The receiver must be placed near the heating control (burner or thermostat input for a boiler, electrical switchboard when used with a contact switch).

To avoid interference with the radio transmission, the antenna must be free from any metallic elements (cables, metallic covers, etc.).



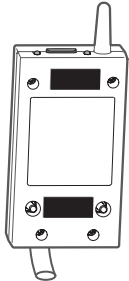
receiver Mounting

Screw-mounting
Mounted on a wall using the screws and pegs supplied.



Mounting by double-sided adhesive tape

If you fit the receiver using adhesive tape, you must strictly follow the installation recommendations (see "location" section). Ensure that the surface on which the tape is applied is thoroughly clean before attaching the tape.



Connecting the receiver

Inverting the relay contact position

During an On command: the relay closes.

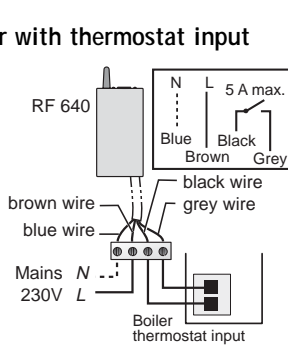
During an Off command: the relay opens.

You can invert the operation of the relay by pressing the relevant button on the receiver for about 10 seconds.

| Command sent | Contact | Inverted contact |
|--------------|---------|------------------|
| ON | ON | OFF |
| OFF | OFF | ON |

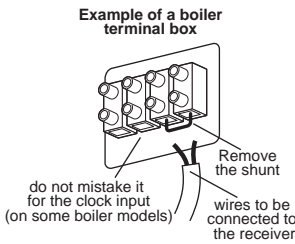
Connecting a boiler with thermostat input

Connect the black and grey wires of the receiver to both terminals of the boiler thermostat input.



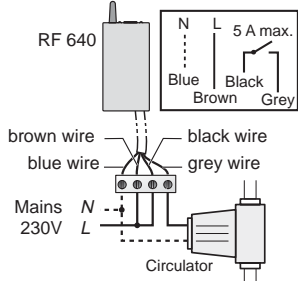
If necessary, remove the shunt (electric wire) connecting the two thermostat input terminals.

If the boiler has a clock input, do not mistake it for the thermostat input.



Connecting a boiler without thermostat input

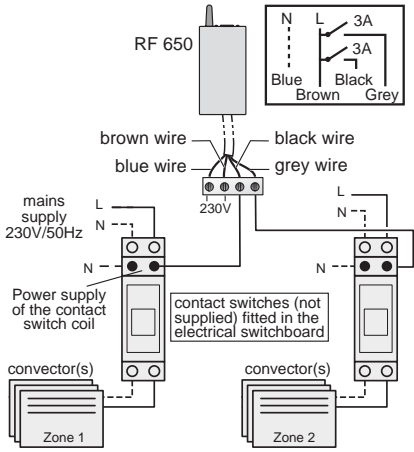
If the boiler does not have a thermostat input, you can directly control the circulator located next to the boiler.



The contact output of the RF 640 receiver is not powered (dry contact).

Connecting the receiver

To control electrical convectors, you **MUST** use a power contact switch that is suitable for the total power to be controlled.



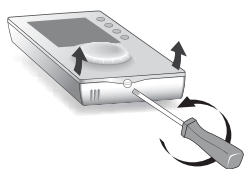
The contact outputs of the RF 650 receiver are powered (phase).

Location / Mounting

For easier use, the RADIO TYBOX can be installed:

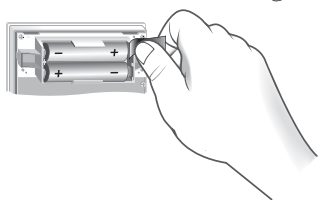
- mounted on the wall with screws and pegs at an approximate height of 1.5 m,
- on a support placed on an item of furniture or a shelf.

Separate the unit from its base by unlocking the casing.



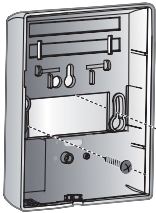
Starting up

Remove the batteries' protective tabs.



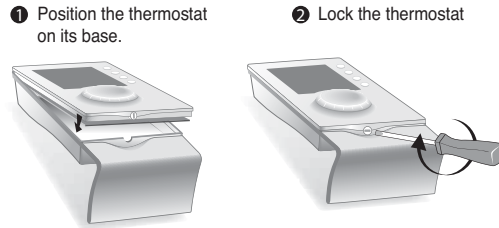
Screw-mounting

Mount the base with screws and pegs suited to the support or on a flush-mounted box, then close and lock the unit.



Fitting to the base

Position the unit on its base and lock it.



Time setting

When you turn the unit on for the first time, you will need to set the time.

Turn the knob to . The days flash.

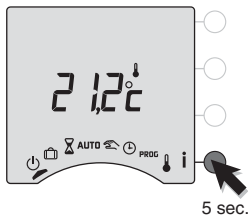
Press + or - to change the day, then press OK to confirm and continue on to the next setting.

Repeat the operations to set the hours and minutes.

To leave the "time setting" mode, turn the knob.

Configuration

Turn the knob to to access the configuration menus, then press the button for 5 seconds.



The unit will propose 4 configurations to choose from:

Unit version

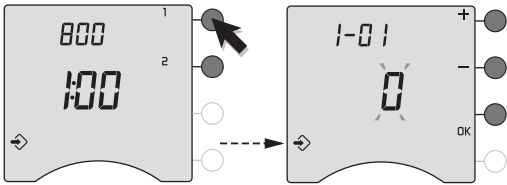
Configuration mode

- 1 Basic configurations (Menu 1)
- 2 Advanced configurations (Menu 2)
- 3 Configurations of the consumption indication function (Menu 3)
- R Radio association

Menu 3 can only be accessed when the RADIO TYBOX is associated with a RADIO TYWATT.

Basic configurations (menu 1)

Press button 1,



To change the various settings, press the + or - buttons, then press OK to confirm the change and go to the next setting.

| | | |
|-----------------------|---|---------------------|
| 1-01 | 0 | Weekly (by default) |
| Choice of programming | 1 | Daily |

| | | |
|----------------------------------|---|--------------------------------|
| 1-02 | 0 | 1-hour increments (by default) |
| Choice of programming increments | 1 | 30-minute increments |
| | 2 | 15-minute increments |

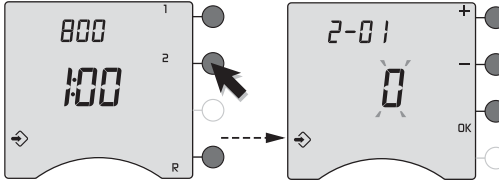
With thermostatic valve electric heating or hot water heaters, the Comfort temperature can be provided by adjusting the thermostat of each radiator. In this case, only Economy and Frost Protection temperatures are set by the RADIO TYBOX.

| | | |
|-----------------------------|---|---|
| 1-08 | 0 | Comfort temperature set by the RADIO TYBOX (by default) |
| Temperature control Comfort | 1 | Comfort temperature set on each radiator or convector. In this option the screen displays Conf. |

| | | |
|-------------------------|---|---|
| 1-09 | 0 | Anti-seizing off (by default) |
| Circulator anti-seizing | 1 | Anti-seizing enabled (circulator operates for 1 minute every 24 hours). |

Advanced configurations (menu 2)

Press button 2.



To change the various settings, press the + or - buttons, then press OK to confirm the change and go to the next setting.

| | | |
|---|---|--|
| 2-01 | 0 | Program and temperature settings (from 5 to 30°C) modification authorized |
| Modification authorization for the user | 1 | Program and set-point setting modification unauthorized (Comfort: 16 to 22°C, Economy: 13 to 19°C Frost Protection: 5 to 11°C) |

Advanced configurations (menu 2)

If there is a difference between the temperature noted (thermometer) and the temperature measured and displayed by the unit, function 2-02 modifies the way the probe takes measurements so as to compensate for this difference.

| | | |
|---|---|---|
| 2-02 | 0 | Correction possible from -5°C to +5°C in increments of 0.1°C. Press the + or - buttons to make changes, and confirm with the OK button. |
| Correction of the measured temperature. | | |

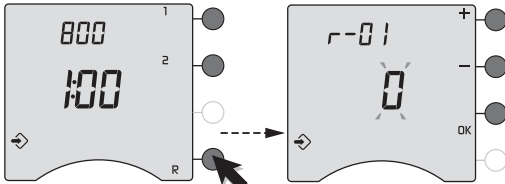
| | | |
|------|---|--|
| 2-02 | 1 | E.g. If the temperature displayed by the unit is 19°C and the temperature measured is 20°C, add 1°C to the display and confirm by pressing OK. |
| | | |

| | | |
|---|---|--|
| 2-04 | 0 | Continuous set-point temperature display (by default). |
| Automatic mode temperature display option | 1 | Continuous room temperature display. With this option, press i to display the set-point temperature. |

Radio association (menu R)

This menu lets you associate all the installation's wireless products (transmitters and receivers) with the RADIO TYBOX.

Go to the radio association menu



Home automation features on the installation

Up to 8 home automation products can be associated with the RADIO TYBOX.

The features are the following:

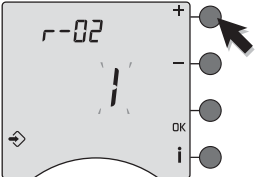
- operation with door/window magnetic contacts,
- operation with a TYXAL alarm central control unit,
- operation with TYXAL or TYDOM remote controls (Delta Dore),
- operation with a home automation transmitter (e.g. TYDOM 310).

| | |
|---|--|
| r-01 | 0 Pas de fonctions domotiques |
| Fonctions domotiques sur l'installation | 1 Fonctions domotiques associées au RADIO TYBOX |

Press + or - to make your choice.
Press OK to confirm and go to the next mode.

“Consumption indication” feature

To associate a consumption indicator with the RADIO TYBOX (e.g. RADIO TYWATT).

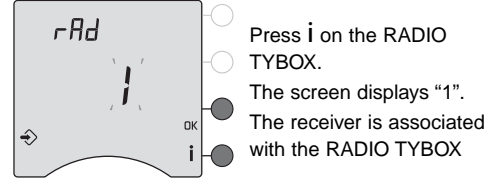


| | |
|---------------------------------|---|
| r-02 | 0 No consumption indication |
| Consumption indication function | 1 Consumption indicator to associate |

Press + or - to display “1” flashing.
Confirm on the RADIO TYWATT.

Check on the RADIO TYBOX that “1” is no longer flashing.
The RADIO TYBOX and the RADIO TYWATT are associated.

Radio association
From the menu rAd.
1st step: the receiver is delivered already associated with the transmitter.
The display indicates “rAd” as well as the number of associated products (1 receiver).
You can go straight on to the 2nd step, associating home automation products
To associate a wireless receiver again, you must first remove all associations (see Removing radio associations section), then, on the receiver: for three seconds, press and hold the button of the channel you wish to associate.
The corresponding LED flashes.



The association operation is carried out channel by channel on the RF 650 receiver.

2nd step: associating the home automation products.
On the transmitter, confirm the association as indicated in the table or refer to its user guide.
Each newly associated transmitter is displayed on the screen.

| Transmitter | Association |
|---|---|
| Door/window | Press the button. |
| Open Window: heating in frost protection mode | |
| TYXIA remote control | Simultaneously press and hold the buttons for 5 seconds, the LED comes on, goes off, and then comes back on, release the buttons. |
| Comfort or Economy overrides. | |

Radio association (menu R)

| Transmitter | Association |
|---|--|
| Telephone transmitter | |
| Remote control of the installation | Enter the first 4 numbers of the access code (1234 by default), then press the button for 5 seconds. |
| TYXAL control unit | Set the control unit to maintenance mode before switching the RADIO TYBOX to radio association (menu rAd). Simultaneously press and hold the ON and OFF buttons of the unit's control device for 5 seconds to switch to maintenance mode. Open the cover of the control unit and press the “test” button. Close the control unit. |
| Monitoring alarm on: Heating in Economy mode | |
| Monitoring alarm off: Heating in Comfort mode | |

| Transmitter | Association |
|---|--|
| Home automation remote control | Press the domain button until until the remote control emits a beep and the symbol flashes. Associate the buttons and . Press one of the tactile buttons or . |
| Overrides Comfort / Economy or On / Off | Associate the buttons and . Press one of the tactile buttons or . To exit the association mode, press another domain button (e.g.). |
| Outdoor probe | Open the sensor's casing. Press the association button, the red LED will switch on then off. Close the sensor unit. |

Once the radio associations are made, press the OK button to confirm and go on to the next mode.

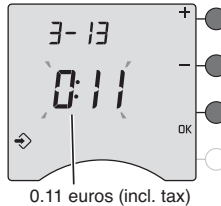
Option configuration (menu 3)

The menus 3-12 to 3-18 are only accessible if the RADIO TYBOX is associated with a RADIO TYWATT.
To access the display of consumption, heating, DHW and other uses, you must declare the number of CTs (current transformers, ref. 6330004) associated with the RADIO TYWATT option.

| | |
|---------------|---|
| 3-12 | 0 No consumption indication (by default) |
| Number of CTs | 1 1 CT (Heating) |
| | 2 2 CTs (Heating + DHW) |
| | 3 Not used |

3-13 to 3-18 Cost per Kwh (incl. tax)

The price displayed is the price per kWh (excl. subscription) expressed in euros including taxes (price including municipal and regional taxes and VAT (average of 30%)).
For further information, contact your electricity provider.
We advise you to round to the nearest cent.
E.g. 0.1085 euros gives 0.11 euros.



Configurations 3-13 to 3-18 let you modify costs according to your subscription.

| Subscription option | Base | Double tariff | tempo | EJP |
|---------------------|------|---------------|--------------|--------------|
| 3-13 | Base | OP | OP blue day | Normal hours |
| 3-14 | - | PH | PH blue day | Peak hours |
| 3-15 | - | - | white day OP | - |
| 3-16 | - | - | white day PH | - |
| 3-17 | - | - | red day OP | - |
| 3-18 | - | - | red day PH | - |

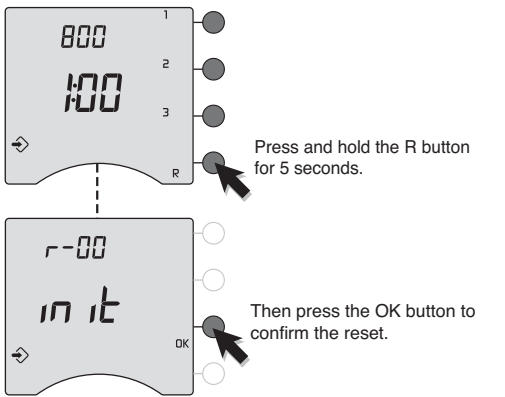
PH: Peak Hours, OP: Off-peak Hours

IMPORTANT: The consumption value that you can read on the digital screen is a non-contractual indication and cannot be substituted with the consumption value mentioned on your electricity bill.

After menu 3 has been configured, the unit returns to the choice of menus.
To exit the configuration, turn the knob to the right.

Removing radio associations

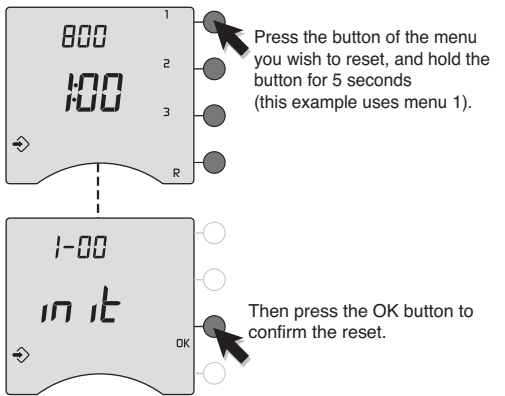
To cancel all radio associations, turn the knob to , then hold the button down for 5 seconds.
To associate the receiver with the transmitter again, refer to the “radio association” section.



NOTE: You can manually reset the receiver by pressing the button of the channel to associate for 30 seconds until the LED flashes rapidly.

Return to the factory configuration

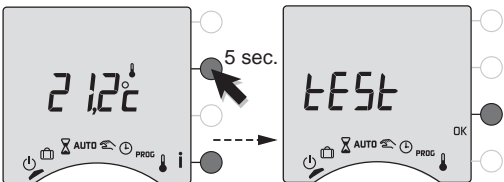
Returning to the factory configuration is possible for each of the menus.
Turn the knob to , then press and hold the button for 5 seconds.



Follow the same steps for the other menus.
To exit this mode, turn the knob to the right.

Radio test

Turn the knob to , then hold the 2nd button (from the top) down for 5 seconds until **tESt** appears.



The LED on the receiver should flash for each reception (approximately every 6 seconds).
If this happens, radio transmission is occurring correctly.
If this does not occur, move your transmitter.
Turn the knob or press the OK button to exit the **tESt** mode.

Summary table of configurations

| Radio association (menu R) | |
|----------------------------|---|
| r-01 | Home automation features 0 = No 1 = Yes |
| r-02 | Consumption indication 0 = No 1 = Yes |
| rAd | Radio association |
| zone rAd 1 | Reserved menu |
| With a RADIO TYWATT | |
| 3-12 | Number of CTs 0 = No RADIO TYWATT 1 = 1 CT (Heating) 2 = 2 CTs (Heating + DHW) 3 = 3 CTs (Three-phase) |
| 3-13 à 3-18 | Cost per kWh according to subscription |

Technical characteristics

RADIO TYBOX transmitter

- Power supplied by two LR03 or AAA-type 1.5 V alkaline batteries (supplied), autonomy of 2 years for normal use
- Class III insulation
- Clock back-up in the event of battery change: 30 seconds
- Radio range 100 to 300 metres outside, variable depending on the associated equipment (the range can be altered depending on the installation conditions and the electromagnetic environment)
- Radio frequency 868 MHz, class I (standard EN 300 220)
- Wireless remote control device
- Dimensions: LxHxD = 80 x 103 x 16 mm
- Protection index: IP 30
- Storage temperature: -10°C to +70°C
- Operating temperature: 0°C to +40°C
- Installation in an environment with normal pollution levels
- Mounting with screws or on a support

Technical characteristics

RF 640 / RF 650 receivers

- 230 V, 50 Hz power supply, ±10%
- Class II insulation
- Power consumption: 0.5 VA
- 1 dry contact output, 5 A max. (RF 640)
- Two 3 A powered contact outputs, 230 V Cos φ = 1 (RF 650)
- Radio frequency 868 MHz (standard EN 300 220)
- Radio range 100 to 300 metres outside, variable depending on the associated equipment (the range can be altered depending on the installation conditions and the electromagnetic environment)
- Type 1.C automatic action (brownout)
- Operating temperature: -5°C to +55°C
- Storage temperature: -10°C to +70°C
- Dimensions: LxHxD = 102 x 54 x 20 mm
- Protection index: IP 44
- Installation in an environment with normal pollution levels

Troubleshooting

Nothing is displayed on the room unit screen.
There is no power supply.
Check the batteries.

The receiver does not accept orders from the transmitter.

- Check the transmission by performing a radio test.
- Move your transmitter if necessary.
- Repeat the radio-controlled association of the receiver with the RADIO TYBOX.

The indication is displayed.
The batteries are low.
Change the batteries, making sure they are the right way round.

The unit displays: dEF 6
There is a communication fault between the RADIO TYBOX and the RF 640 or RF 650 receivers.
Check the installation.

You wish to associate a home automation feature and the screen displays ----.
You have reached the maximum number of functions to associate.

During the radio association, then device displays: Zone rAd 1.
This menu is reserved.
Associate the receiver again from the rAd menu.